ANGLO-CHINESE SCHOOL
(PRIMARY)

END-OF-YEAR EXAMINATION 2006

MATHEMATICS

Booklet A

Name: _____( )

Class: Primary 5__

Date: 31 October 2006

Duration of Booklet A & B: 2 hr 15 mins

THIS BOOKLET CONTAINS PAGE 1 to 5.
DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

SECTION A - Multiple Choice Questions (20 MARKS)

Questions 1 to 10 carry 1 mark each.
Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet (OAS).

1. In 809 632, the value of the digit 8 is 8 x _____.

   1) one million
   2) one thousand
   3) one ten thousand
   4) one hundred thousand

2. Round off 49.45 to 1 decimal place.

   1) 49.0
   2) 49.4
   3) 49.5
   4) 50.0

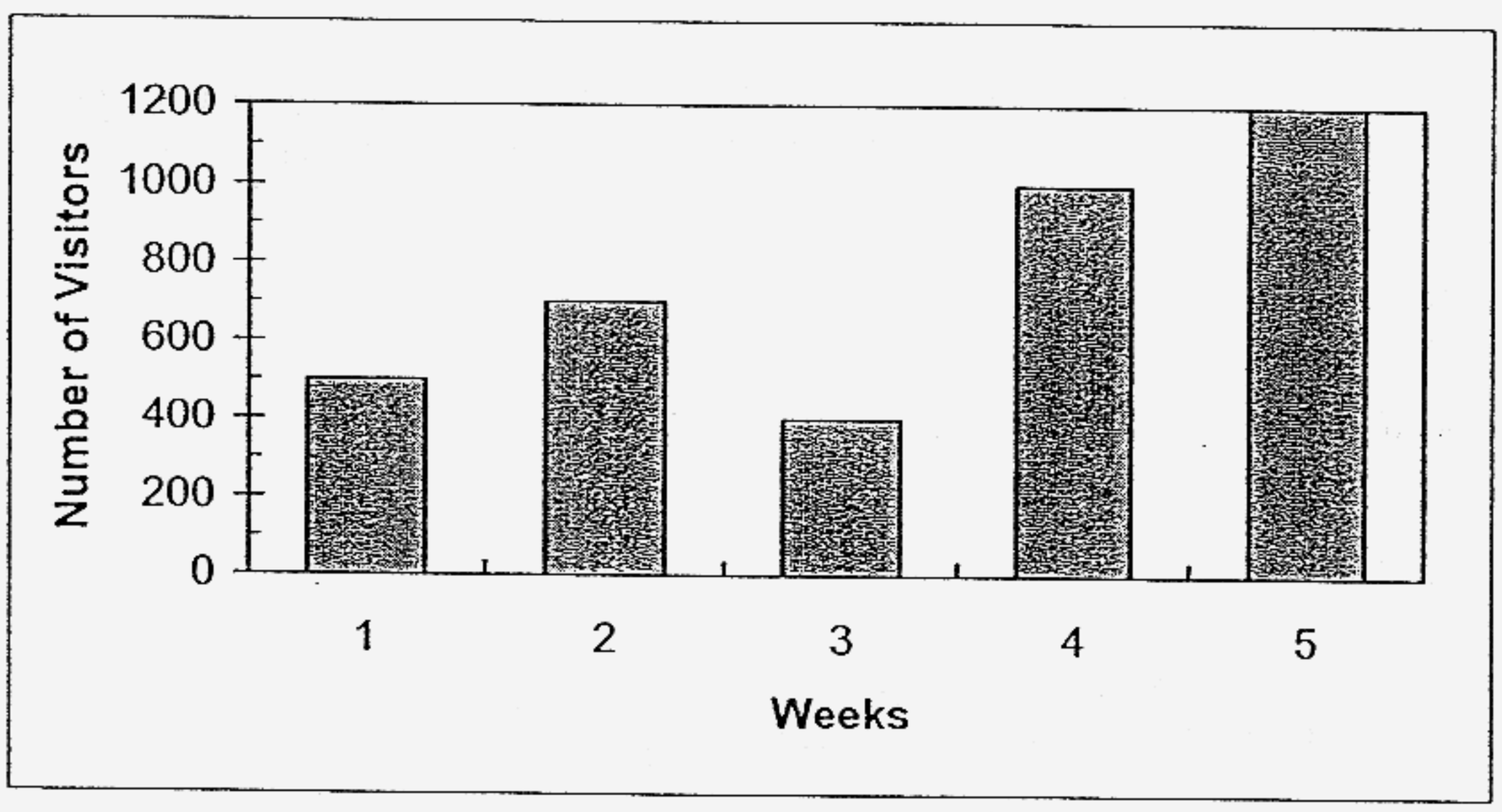
3. What is the value of 99 ÷ 11 - 3 x 2 ?

   1) 22
   2) 12
   3) 6
   4) 3

4. $\frac{1}{4}$ of the pupils in the class wear spectacles. What percentage of the pupils in the class **do not** wear spectacles?

1) 20%
2) 25%
3) 40%
4) 75%

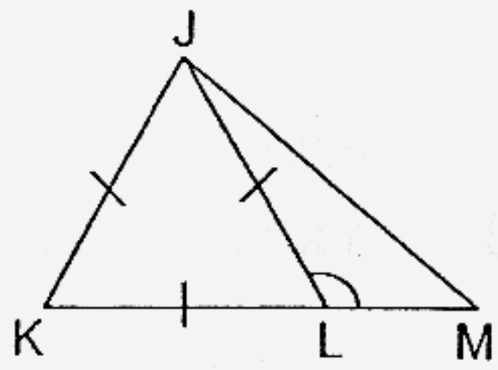
5. The following graph shows the number of visitors who had visited the zoo over a period of weeks. What was the increase in the number of visitors from week 3 to week 4?



1) 600
2) 800
3) 1 000
4) 1 400

6. In the figure not drawn to scale, find ∠JLM.

1) 50°
2) 60°
3) 120°
4) 130°



7. Sue spent 30 minutes having lunch, 48 minutes travelling and $1\frac{1}{4}$ hour watching television. Find the average time (in minutes) she spent to carry out each activity.

1) 51

2) $54\frac{1}{3}$

3) 64

4) $67\frac{2}{3}$

8. How many different handshakes can be made in a party of 6 children, assuming that each child shakes hands with every other child only once?

1) 6

2) 10

3) 12

4) 15

9. What is the maximum number of 3-cm cubes that can be packed into a rectangular box of sides 15 cm by 9 cm by 8cm?

1) 30

2) 40

3) 120

4) 360

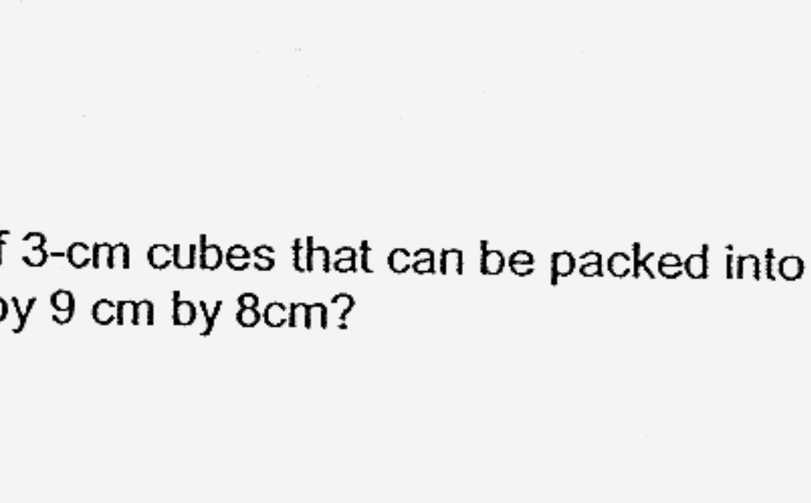
10. In the figure, not drawn to scale, QRS is a straight line. Find $\angle PRS$.

1) 40°

2) 65°

3) 115°

4) 140°



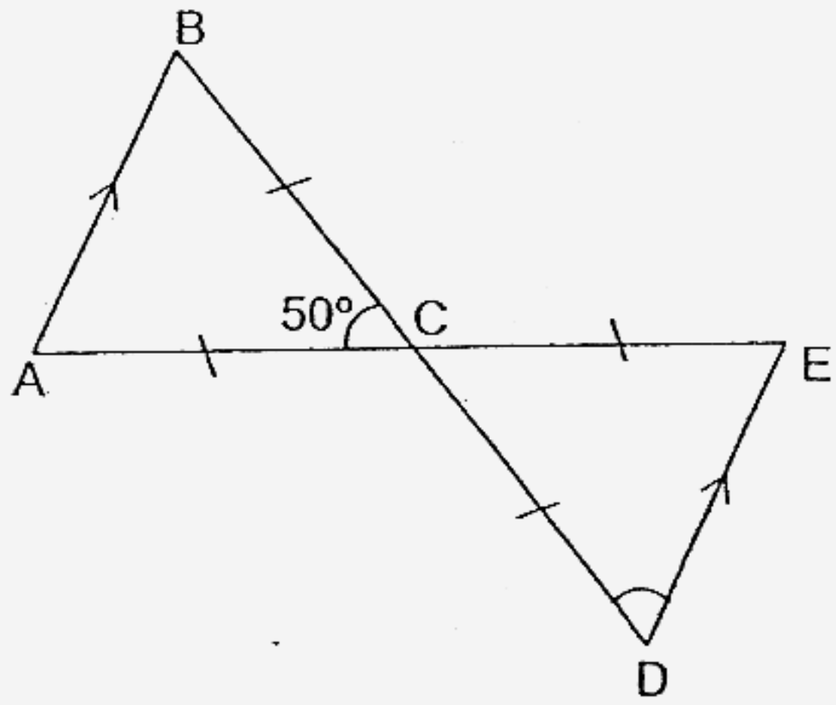
11. In the figure, not drawn to scale, ABC and CDE are identical isosceles triangles. Find ∠CDE.

1) 25°

2) 50°

3) 65°

4) 130°



12. James and Ravi were given some money in the ratio 5 : 2. If James received $300 more than Ravi, how much was the total sum of money given to both of them?

1) $200

2) $420

3) $500

4) $700

13. At a bookshop, pens were sold in sets of 12. Each set costs $3. George has $15.30. What is the maximum number of pens he can buy?

1) 12

2) 36

3) 60

4) 61

14. The perimeter of the base of a rectangular tank is 64 cm. What is the volume of the tank if the ratio of its length to breadth to height is 5 : 3 : 6?

1) 112 cm^3

2) 384 cm^3

3) 5 760 cm^3

4) 46 080 cm^3

15. The average age of Tom and Jerry is 9 years 4 months.
If Tom is 8 years 2 months now, what will be the age of Jerry in 2 years' time?

1) $5\frac{1}{2}$ years

2) $10\frac{1}{2}$ years

3) $12\frac{1}{5}$ years

4) $12\frac{1}{2}$ years

ANGLO-CHINESE SCHOOL
(PRIMARY)

END-OF-YEAR EXAMINATION 2006

MATHEMATICS

Booklet B

Name: _____( )

Class: Primary 5__

Date: 31 October 2006

Duration of Booklet A & B: 2 hr 15 mins

Section	Contents	Marks	Marks Obtained
A	Multiple Choice Questions	20	
B	Short Answers: Part I	10	
	Short Answers: Part II	20	
C	Problem Sums	50	
	Total Marks	100	
	Parent's Signature	----	

THIS BOOKLET CONTAINS PAGE 6 to 23.
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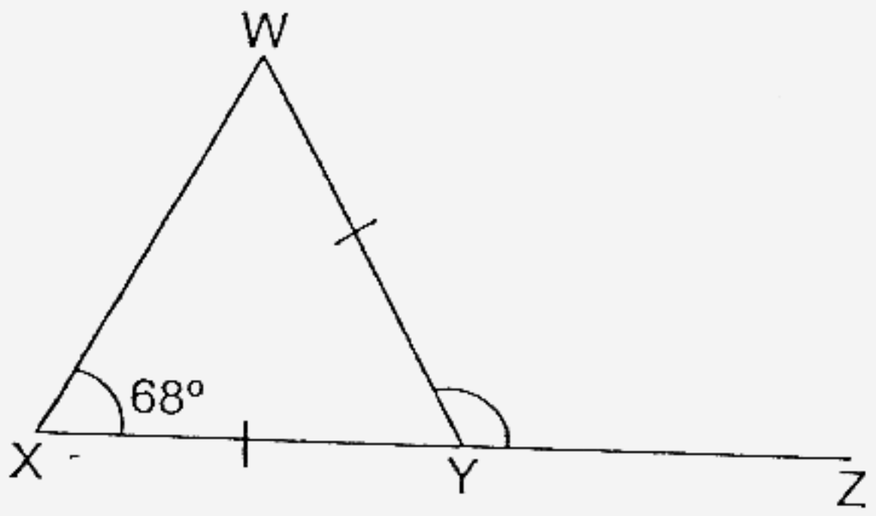
SECTION B - Short Answers (30 MARKS)

Part I (10 × 1 mark)

Questions 16 to 25 carry 1 mark each. Write your answer in the space provided.
Give your answers in the units stated.

16. In the figure, not drawn to scale, XYZ is a straight line. Find $\angle WYZ$.



Answer : _____°

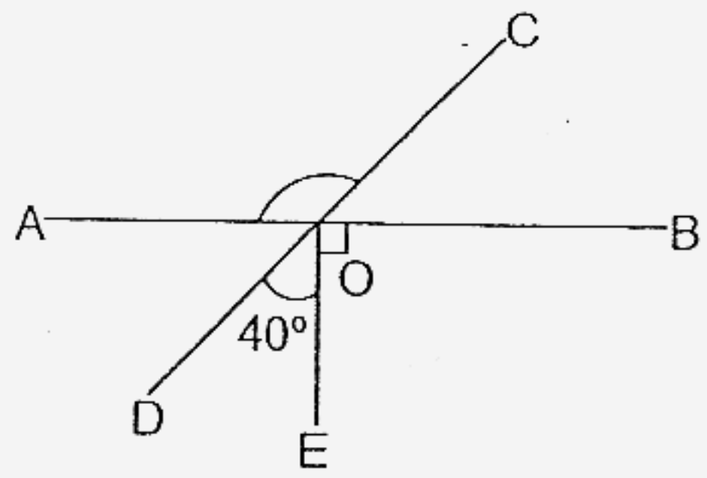
17. A ferris wheel turns at the rate of 4 degree (°) per second. How many minutes does it take to complete one turn?

Answer : _____minutes

18. Express $\frac{17}{25}$ as a decimal.

Answer : _____

19. In the figure, not drawn to scale, AB and CD are straight lines. Find ∠AOC.



Answer : _____ °

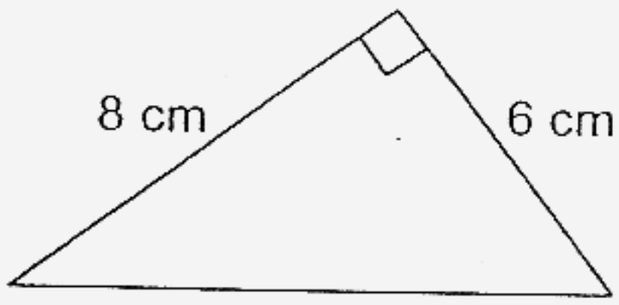
20. Find the value of $\frac{\cdot\cdot 5}{6} \div 10$.

Answer : _____

21. The ratio of the length of the sides of a triangle is 4 : 2 : 3. If the length of the shortest side is 16 cm, find its perimeter.

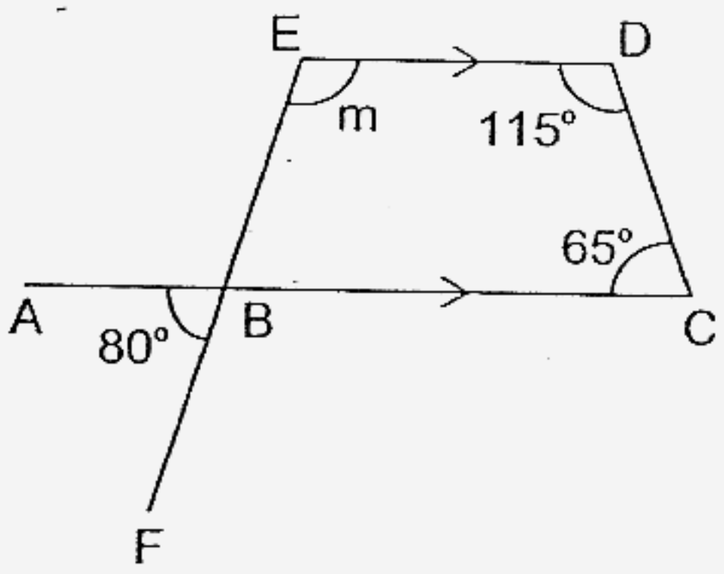
Answer : _____ cm

22. Find the area of the triangle.



Answer : _____ cm^2

23. In the figure, not drawn to scale, ABC and EBF are straight lines. BCDE is a trapezium. Find ∠m.



Answer : _____ °

24. A gold bar measuring 16 cm by 9 cm by 6 cm is melted and recast into a new gold bar with a length of 18 cm and a height of 4 cm. What is the width of the new gold bar?

Answer : _____ cm

25. The sum of sixteen numbers is 168. What is their average?

Answer : _____

Part II (10 × 2 marks)

Questions 26 to 35 carry 2 marks each. **Show all workings clearly.**
Write your answer in the space provided. Give your answers in the units stated.

26. A set of dining table costs $1 200. Mr Lee bought the set of dining table and paid an additional 5% GST. How much did he pay in all?

Answer : $ _____

27. Mangoes are sold at $1.65 per 100 g at a supermarket. What is the price of 2 kg of mangoes?

Answer : $_____

28. Mr Ronald bought 5 shirts and 2 pairs of trousers for $360. The 5 shirts cost as much as 4 pairs of trousers. Find the cost of each shirt.

Answer :$ _____

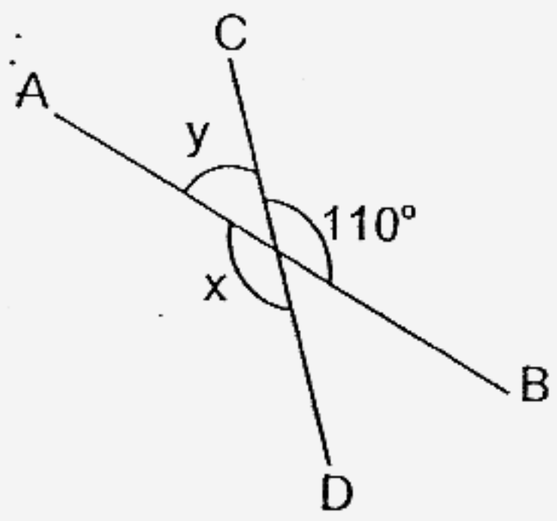
29. John parks his car at a shopping centre. The car park charges are $1.40 for the first hour and $1.00 for the subsequent half hour or part thereof. How much does it cost to park his car in the shopping centre from 10.30 a.m. to 2.45 p.m.?

Answer : $ _____

30. In a class of 45 pupils, $\frac{3}{5}$ of them participated in a singing competition. $\frac{2}{3}$ of the participants were boys and the rest were girls. How many girls in the class participated in a singing competition?

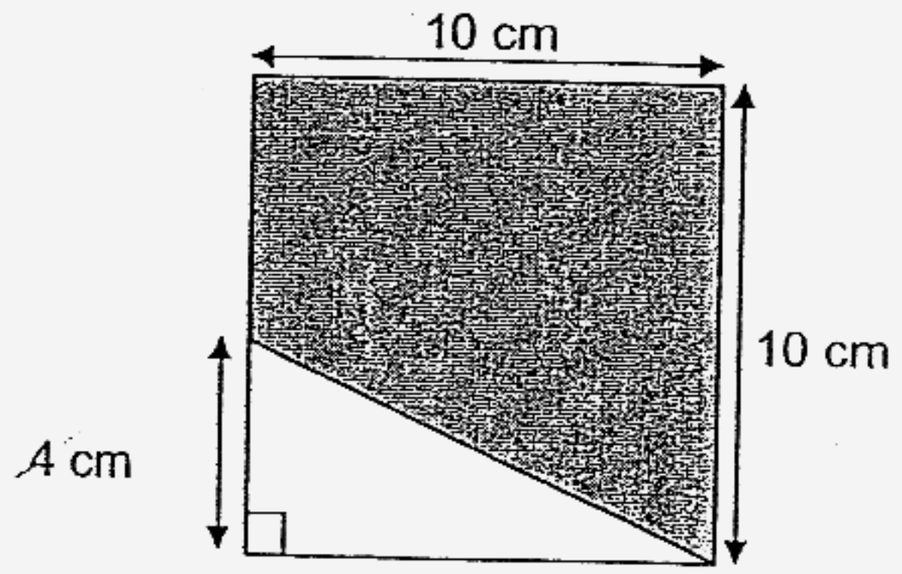
Answer: _____ girls

31. In the figure, not drawn to scale, AB and CD are straight lines. Find the difference between $\angle x$ and $\angle y$.



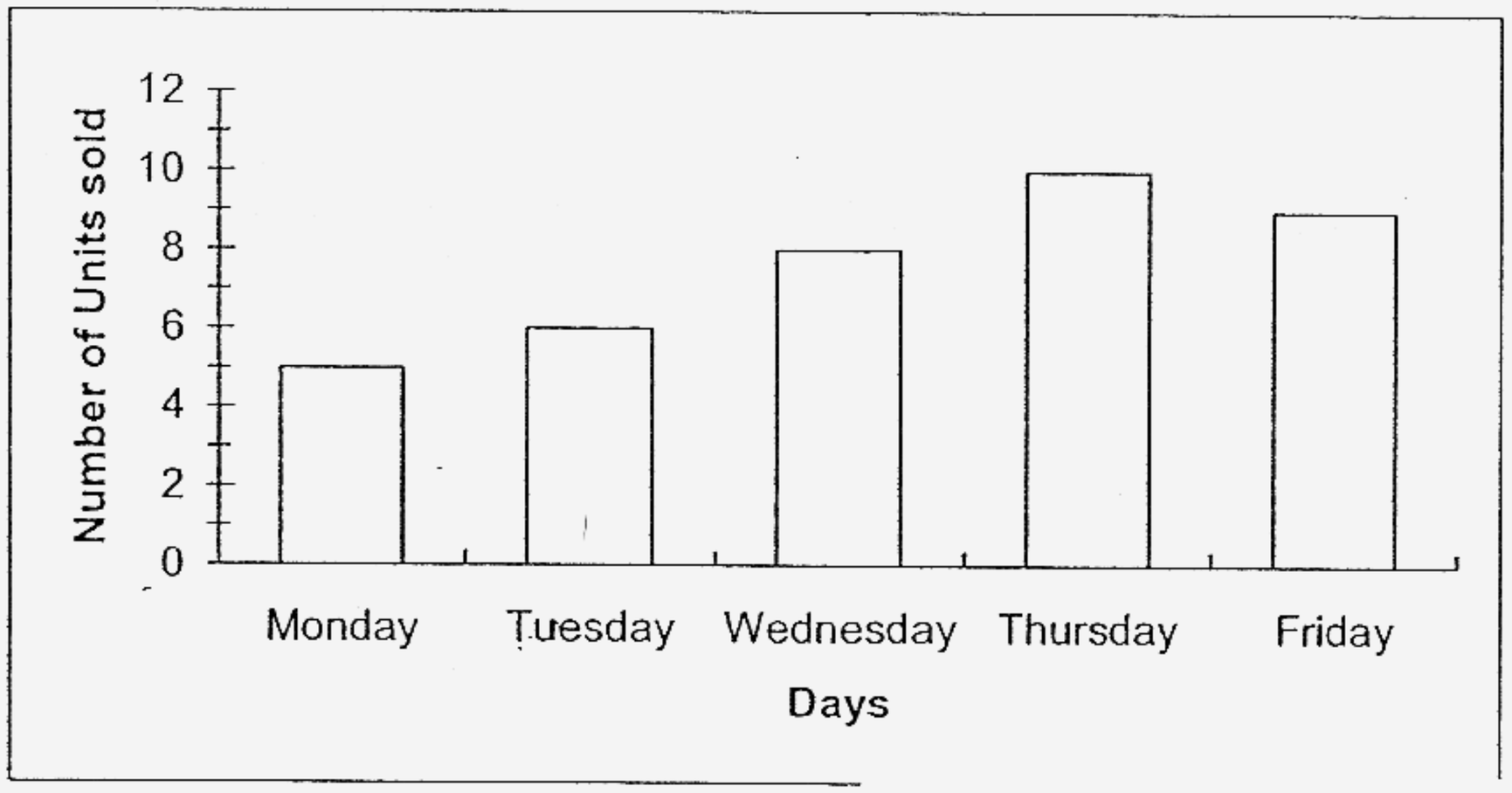
Answer : _____ °

32. Find the area of the shaded part.



Answer : _____ cm^2

33. The following graph shows the number of condominium units sold by Mr Tan over the weekdays. He was paid $2 000 for selling each unit and an additional $1 000 for every 10 units. How much did he earn altogether for the five days?



Answer : $ _____

34. A box containing 6 identical books weighs 2.7 kg. The same box containing 12 such books weighs 5.1 kg. What is the weight of the box?

Answer : _____kg

35. The total mass of 4 boys and 5 girls is 378 kg. If the average mass of the 5 girls is 38 kg, find the average mass of the 4 boys.

Answer : _____kg

SECTION C - Problem Sums (50 MARKS)

For each question from 36 to 48, show your working and mathematical statements clearly in the space below each question. Write your answer in the answer space provided. Marks awarded are shown in the brackets [ ].

36. Charles had three times as many coins as stamps in his collection. After he had given 43 coins to his sister, he had twice as many coins as stamps left. How many coins did Charles have at first?

Answer : _____ [3]

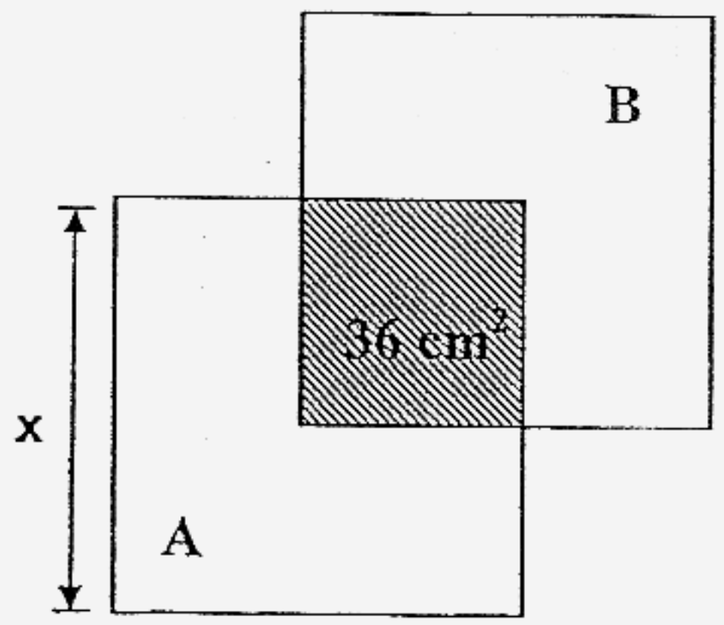
37. The ratio of the number of 20¢ coins to the number of 50¢ coins to the number of $1 coins in a bag is 2 : 4 : 7. Given that the total amount of money in the bag is $47, how many coins are there altogether?

Answer: _____ [3]

38. Mr Ravi withdrew 40% of his savings from the bank. He used 25% of it to buy a computer and $200 on a printer. If he still had $610 left, how much savings did he have in the bank at first?

Answer : _____ [3]

39. Two identical big squares A and B overlap to form a small square of area 36 cm^2. The ratio of the shaded area to the unshaded area is 1 : 6. Find the length of x.

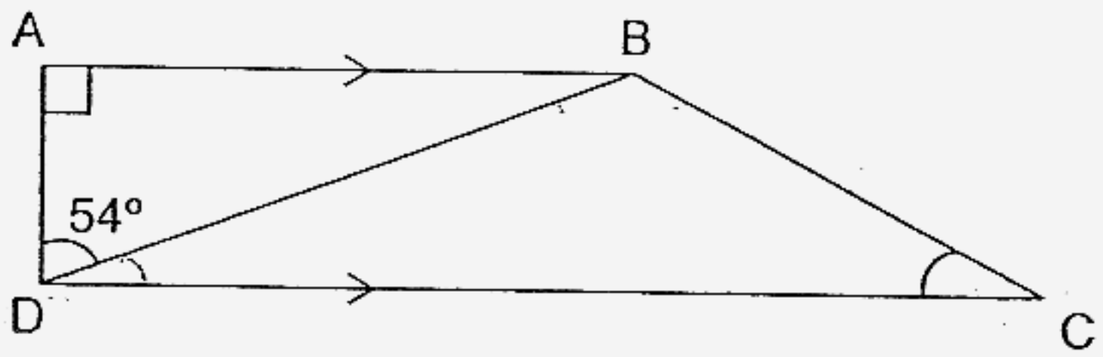


Answer : _____ [3]

40. Lamp posts are placed round a square field measuring 60 m by 60 m. The lamp posts are placed 10 m apart with a post at each corner. How many posts are needed in all?

Answer : _____[3]

41. In the following figure, not drawn to scale, ∠CBD is 2 times the size of ∠BCD. Find ∠BCD.



Answer : _____[3]

42. Tap X can fill a tank in 4 minutes. Tap Y can fill a similar tank in 6 minutes.

a) What fraction of the tank is filled when Tap X is turned on after $1\frac{1}{2}$ minute?

b) What fraction of the tank is filled after one minute when both taps are turned on at the same time?

c) How long will it take to fill up this tank when both tanks are turned on at the same time?

taps

Answer : (a) _____ [2]

(b) _____ [2]

(c) _____ [1]

43. During a travel fair, 120 families chose Switzerland as their holiday destination. 80% of the remaining families chose Australia while the rest chose Japan. If 10% of all the families at the travel fair chose Japan, how many families were there at the travel fair?

Answer : _____ [4]

44. Michael and Luke had 600 stickers altogether. After Michael had given away 40 of his stickers, $\frac{2}{5}$ of the number of Luke's stickers is equal to $\frac{2}{3}$ of Michael's stickers.

a) How many stickers did Michael have at first?

b) How many stickers did Luke buy so that the ratio of the number of Luke's stickers to number of Michael's stickers is now 7 : 3?

Answer : (a)_____[2]

(b)_____[2]

45. Study the Pascal's Triangle shown below and answer the questions that follow.

1st row					1					
2nd row				1		1				
3rd row			1		2		1			
4th row		1		3		3		1		
5th row	1		4		6		4		1	
6th row	1	___		___		___		___		1

[2]

a) Complete the 6th row of the Pascal's Triangle by filling in the blanks above.

b) Find the sum of the numbers in the 6th row.

c) Find the sum of the numbers in the 10th row.

Answer : (b) _____[1]

(c) _____[2]

46. An empty rectangular tank has a base measuring 150 cm by 40 cm. When 90 000 cm^3 of water is added, the water level rises to $\frac{3}{5}$ of the height of the container.

tank

a) Find the height of the tank.

b) How much more water is needed to fill up the tank completely?

Answer : (a)_____[3]

(b)_____[2]

47. In a bookshop, 64% of the books are Chinese books. The rest are Malay and Tamil books. The ratio of the number of Malay books to the number of Tamil books is 3 : 1. There are 110 more Chinese books than Tamil books.

a) What percentage of the books are Malay books?

b) How many Chinese books are there?

Answer : (a) _____[2]

(b) _____[3]

48. At a birthday party, Mr Chew had a bag of sweets. If each child receives 5 sweets, he is left with 6 sweets. If each child receives 7 sweets, he would be short of 4 sweets.

a) How many children are there at the party?

b) How many sweets did Mr Chew give to each child if he is left with only 1 sweet?

Answer : (a) _____ [2]

(b) _____ [2]

END OF PAPER
Check your work carefully!

Anglo-Chinese Primary School

Answer Sheets

Q1	Q2	Q3	Q4	Q5
4	**3**	**4**	**4**	**1**
Q6	Q7	Q8	Q9	Q10
3	**1**	**4**	**1**	**3**
Q11	Q12	Q13	Q14	Q15
3	**4**	**3**	**3**	**4**

16. $\angle WYX = 180° - (68° \times 2)$
$= 180° - 136°$
$= \underline{\mathbf{44°}}$
$\angle WYZ = 180° - 44° = \underline{\mathbf{136°}}$

17. $360° \div 4° = 90sec$
$= 1 \text{ min } 30sec$
$= 1\frac{1}{2}$ **minutes**

18. $\frac{17}{25} = \frac{68}{100}$
$= \underline{\mathbf{0.68}}$

19. $360° - 90° - 40° = 230°$
$230° - 180° = 50°$
$180° - 50° = 130°$

20. $\frac{5}{6} \times \frac{1}{10} = \frac{1}{12}$

21. $2u = 16$
$4u = 32$
$3u = 24$
$24 + 16 + 32 = \underline{\mathbf{72cm}}$

22. $\frac{1}{2} \times 6 \times 8 = \underline{\mathbf{24cm^2}}$

23. $\angle EBC = 80°$ (vert. opp $\measuredangle$)
$\angle m = 180° - 80° = 100°$

24. $6 - 4 = 2$
$16 + 2 = 18$
$4 + 3 = 12$

25. $168 \div 16 = 10.5$

26 100% = $1200
105% = $1260

27. 100g = $1.65
2000g = $165 x 20
= $33.00

28. 5s + 2p = $360.00
4 + 2 = 6p
6p = $360
4p = $240
= $ 240 ÷ 5 = $48.00

29. 10.30am to 2.45pm = 4hrs 15mins
1st hr = $1.40
$1.40 x 4 = $7.00 + $1.40
= $8.40

30. $\frac{2}{3} \times \frac{3}{5} = \frac{2}{5}$ (boys)

$\frac{1}{3} \times \frac{2}{5} = \frac{1}{5}$ (girls)

5u = 45
1u = 9

31. ∠x = 110° (vert. opp ∠)
∠y = 180° – 110°
= 70° (∠ on a straight line)
= 110° – 70°
= 40°

32. 10 x 10 = 100cm²

$\frac{1}{2}$ x 10 x 4 = 20cm²

100 – 20 = 80cm²

33. 5 + 6 + 8 + 10 + 9 = 38
38 ÷ 10 = 3 r 8
$2000 x 10 + $1000
= $21000
$21000 x 3 = $63000
$2000 x 8 = $16000
$(63000 + 16000) = $79000

34. 6 b = 5.1 – 2.7
= 2.4
2.7 – 2.4 = 0.3kg

35. 38 x 5 = 190kg
378 – 190 = 288kg
288 ÷ 4 = 72kg

36. 1u = 43
3u = 43 x 3
= **<u>129 coins</u>**

37. 20¢ : 50¢ : $1.00
2 : 4 : 7

35 + 20 + 10 = **<u>65coins</u>**

38. $610 + 200 = 810$
$810 \div 3 = 270$
$810 + 270 = 1080$
$1080 \div 4 = 270$
$270 \times 10 = 2700$

He has **$2700.00** at first.

39. $36 \times 6 = 216$
$216 \div 2 = 108$
$108 + 36 = 144$
$12 \times 12 = 144$

The length of X is **12cm**

40. $60 \div 10 = 6$
$6 + 5 + 5 + 4 = 20$

20 posts are needed in all

41. $90° - 54° = 36°$
$180° - 36° = 144°$
$2 + 1 + 3$
$144° \div 3 = 48°$

$\angle$BCD is **48°**

42a. $1 \text{ min} = \frac{1}{4}$ tank full

$1\frac{1}{2} \text{ min} = \frac{3}{8}$ tank full

$\frac{3}{8}$ of the tank is full.

42b. Tap X $= \frac{1}{4}$ tank full

Tap Y $= \frac{1}{6}$ tank full

$\frac{1}{4} + \frac{1}{6} = \frac{5}{12}$

$\frac{5}{12}$ of the tank is full after 1 minute

42c. $\frac{5}{12} = 1$ minute

$\frac{12}{12} = \frac{1}{5} \times 12$

$= \frac{12}{5}$

$= 2\frac{2}{5}$

= **2 min 24 seconds**

43. $100\% - 80\% = 20\%$

$20\% = 10\%$

$80\% = 40\%$

$(100 - 10 - 40)\% = 50\%$

$50\% = 120$

$100\% = 120 \times 2$

$= 240$

There are **240 families** at the travel fair.

44a. $8u = 560$
$5u = 350$
$3u = 210$
$210 + 40 = 250$

Michael has **250 stickers** at first

44b. $3u = 210$
$7u = 490$
$490 - 350$
$= 140$ stickers

Luke has to buy **140 stickers**.

45a. **5, 10, 10, 5**

45b. $1 + 5 + 10 + 10 + 5 + 1 = 32$

The su2 of the number in the 6^{th} row is **32**

45c. $7^{th} \longrightarrow 32 \times 2 = 64$
$8^{th} \longrightarrow 64 \times 2 = 128$
$9^{th} \longrightarrow 128 \times 2 = 256$
$10^{th} \longrightarrow 256 \times 2 = 512$

The sum is **512** in the 10^{th} row

46a. $3u = 9000cm^3$
$5u = 30000cm^3 \times 5$
$= 150000cm^3$

$= 150000 \div (150 \times 40)$
$= 25cm$

The height of the tank is **25cm**

46b. $2u = 30000 \times 2$
$= 60000cm^3$

60000cm³ is needed to fill up the tank completely.

47a. $4u = (100 - 64)$

$4u = 36\%$
$1u = 9\%$
$3u = 27\%$
27% are Malay books.

47b. $(64 - 9)\% = 55\%$
$55\% = 110$
$1\% = 10$
$64\% = 64 \times 2$
$= 128$

There are **128** Chinese books

48a. $7 - 5 = 2$
$2u = 6 + 4$
$2u = 10$
$5u = 25$

There are **25 children** at the party.

48b $25 + 6 = 31$
$31 - 1 = 30$
$30 \div 5 = 6$

Mr Chew gave **6 sweets** to each child